

AMENDMENTS TO THE CLAIMS

1. (Currently amended) A portable device having an image pick-up unit picking-up an image of an object and outputting image information, comprising:

a light source emitting light to said object;

a control unit for controlling an emission by said light source based on quantity of light emission, in an image pick-up mode; and

an exposure detecting unit for detecting exposure level based on said image information; wherein

said control unit includes

a light emission quantity determining unit for determining said quantity of light emission,

a comparing unit for detecting a difference by comparing said exposure level detected by said exposure detecting unit with said light source emitting light based on said light emission quantity determined by said light emission quantity determining unit and said exposure level detected by said exposure detecting unit with said light source not emitting light; and

said light emission quantity determining unit determines said light emission quantity based on said difference detected by said comparing unit, to have said exposure level match an optimal level; and

said comparing unit and said light emission quantity determining unit are activated repeatedly for a single image pick-up operation until said exposure level detected by said exposure detecting unit matches the optimal level; and wherein

said exposure detecting unit detects said exposure level with said light source emitting light based on said light emission quantity determined by said light emission quantity determining unit, and immediately thereafter said exposure detecting unit detects said exposure level with said light source not emitting light.

2. (Canceled)

3. (Previously presented) The portable device having an image pick-up unit according to claim 1, wherein

said optimal level is a target exposure level for said image information.

4. (Canceled)

5. (Previously presented) The portable device having an image pick-up unit according to claim 1, further comprising

a storing unit storing image data corresponding to said image information; wherein

when said exposure level detected by said exposure detecting unit matches said optimal level, said image data is stored in said storing unit.

6. (Currently Amended) The portable device having an image pick-up unit according to claim 1, further comprising

a shutter key operated from outside the portable device to instruct storage of said image data to said storing unit; wherein

~~a shutter key operation status is determined, the status determination triggered when said exposure level detected by said exposure detecting unit matches said optimal level is determined, whether said shutter key is operated or not.~~

7. (Currently amended) A portable device having an image pick-up unit picking-up an image of an object and outputting image information, comprising:

a light source emitting light to said object;

control unit for controlling an emission by said light source based on a first quantity of light emission, in an image pick-up mode; and

exposure detecting unit for detecting exposure level based on said image information; wherein

said control unit includes

a light emission quantity determining unit for determining said first quantity of light emission, and

a comparing unit for detecting a first difference by comparing said exposure level detected by said exposure detecting unit with said light source emitting light based on said first light emission quantity determined by said light emission quantity determining unit and said exposure level detected by said exposure detecting unit with said light source not emitting light; and

said light emission quantity determining unit determines said first light emission quantity based on said first difference detected by said comparing unit, and includes a table having ~~said a plurality of reference light emission quantity-quantities and a plurality of reference differences.~~ the reference light emission quantities registered respectively corresponding to each of a plurality of said reference differences; and

said table is looked-up based on said first difference detected by said comparing unit to read corresponding said first light emission quantity.

8. (Previously presented) The portable device having an image pick-up unit according to claim 1, wherein

said control unit further includes

starting state setting unit for setting said light source to a non-emission state at a start of said image pick-up mode, and

start level determining unit for determining whether said exposure level detected by said exposure detecting unit in said non-emission state set by said starting state setting unit matches said optimal level or not; wherein

when it is determined by said start level determining unit that the exposure level does not match, said light emission quantity determining unit and said comparing unit are activated.

9. (Previously presented) The portable device having an image pick-up unit according to claim 8, wherein

when it is determined by said start level determining unit that the exposure level does not match, said light emission quantity determining unit determines said light emission quantity to be the maximum quantity that can be emitted by said light source.

10. (Original) The portable device having an image pick-up unit according to claim 1, wherein

said image pick-up mode includes a close-up mode and a non-close-up mode that are switchable.

11. (Currently amended) An exposure adjusting device, comprising:  
an exposure detecting unit for detecting an exposure level based on image information obtained by picking-up an image of an object;  
a light emission quantity determining unit for determining, in an image pick-up mode, a light emission quantity of a light source provided in advance for emitting light to said object; and  
a comparing unit for detecting a difference by comparing said exposure level detected by said exposure detecting unit with said light source emitting light based on said light emission quantity determined by said light emission quantity determining unit and said exposure level detected by said exposure detecting unit with said light source not emitting light; wherein  
said light emission quantity determining unit determines said light emission quantity based on said difference detected by said comparing unit, to have said exposure level match an optimal level, and

said comparing unit and said light emission quantity determining unit are activated repeatedly for a single image pick-up operation and until said exposure level detected by said exposure detecting unit matches the optimal level, and

said exposure detecting unit detects said exposure level with said light source emitting light based on said light emission quantity determined by said light emission quantity determining unit, and immediately thereafter said exposure detecting unit detects said exposure level with said light source not emitting light.

12. (Canceled)

13. (Previously presented) The exposure adjusting device according to claim 11, wherein  
said optimal level is a target exposure level for said image information.

14. (Canceled)

15. (Currently amended) An exposure adjusting device, comprising:  
an exposure detecting unit for detecting an exposure level based on image information obtained by picking-up an image of an object;  
a light emission quantity determining unit for determining, in an image pick-up mode, a first light emission quantity of a light source provided in advance for emitting light to said object; and  
a comparing unit for detecting a first difference by comparing said exposure level detected by said exposure detecting unit with said light source emitting light based on said first light emission quantity determined by said light emission quantity determining unit and said exposure level detected by said exposure detecting unit with said light source not emitting light;  
wherein

said light emission quantity determining unit determines said first light emission quantity based on said first difference detected by said comparing unit, and includes a table having said a plurality of reference light emission quantity-quantities and a plurality of reference differences, the reference light emission quantities registered respectively corresponding to each of a plurality of said reference differences; and

said table is looked-up based on said first difference detected by said comparing unit to read corresponding said first light emission quantity.

16. (Previously presented) The exposure adjusting device according to claim 11, further comprising:

starting state setting unit for setting said light source to a non-emission state at a start of said image pick-up mode, and

start level determining unit for determining whether said exposure level detected by said exposure detecting unit in said non-emission state set by said starting state setting unit matches said optimal level or not; wherein

when it is determined by said start level determining unit that the exposure level does not match, said light emission quantity determining unit and said comparing unit are activated.

17. (Previously presented) The exposure adjusting device according to claim 16, wherein

when it is determined by said start level determining unit that the exposure level does not match, said light emission quantity determining unit determines said light emission quantity to be the maximum quantity that can be emitted by said light source.

18. (Original) The exposure adjusting device according to claim 11, wherein said image pick-up mode includes a close-up mode and a non-close-up mode that are switchable.

19. (Currently amended) A portable device having an image pick-up unit picking-up an image of an object and outputting image information, comprising:

a light source emitting light to said object;

a storing unit storing image data corresponding to said image information;

a shutter key; and

a control unit storing image data corresponding to said image information in said storing unit in response to an operation of said shutter key, and when an image pick-up mode is set, starting emission of light of said light source automatically in accordance with an exposure level based on said image information regardless of an operation of said shutter key .

20. (Previously presented) The portable device having an image pick-up unit according to claim 19, wherein

said control unit stops emission of said light source in accordance with the exposure level based on said image information regardless of the operation of said shutter key, in a state after emission of said light source is started.

21. (Previously presented) The portable device having an image pick-up unit according to claim 20, further comprising

a display unit for displaying various pieces of information; wherein

said control unit displays image data corresponding to said image information on said display unit when said image pick-up mode is set.

22. (Previously presented) The portable device having an image pick-up unit according to claim 19, further comprising

a display unit for displaying various pieces of information; wherein

said control unit displays image data corresponding to said image information on said display unit when said image pick-up mode is set.